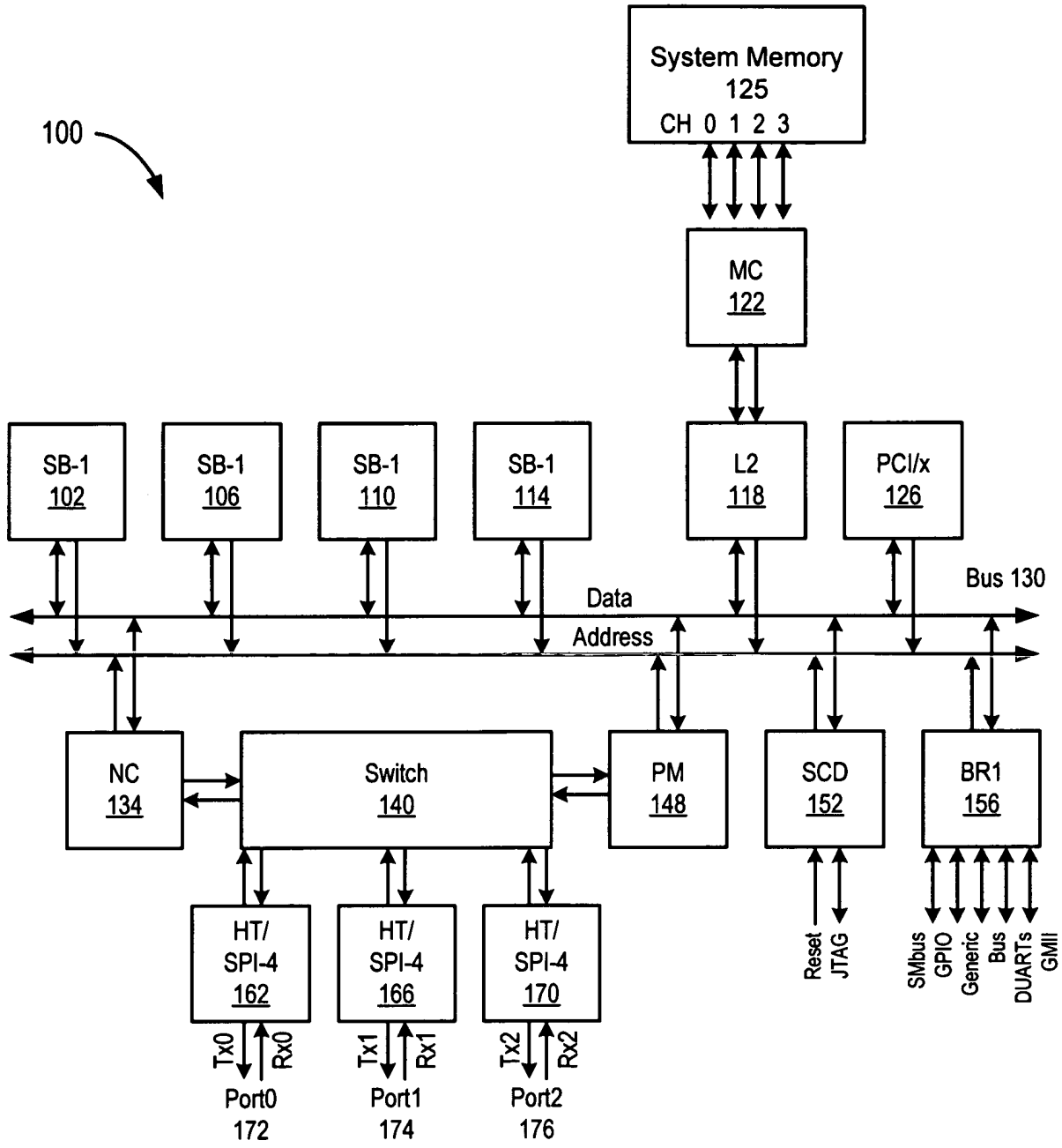
100
System Memory
125
CH 0 1 2 3
MC
122
SB-1
102
SB-1
106
SB-1
110
SB-1
114
L2
118
PCI/x
126
Bus 130
Data
Address
NC
134
Switch
140
PM
148
SCD
152
BR1
156
HT/
SPI-4
162
HT/
SPI-4
166
HT/
SPI-4
170
Tx0
Rx0
Tx1
Rx1
Tx2
Rx2
Port0
172
Port1
174
Port2
176
Reset
JTAG
SMbus
GPIO
Generic
Bus
DUARTs
GMII

Figure 1

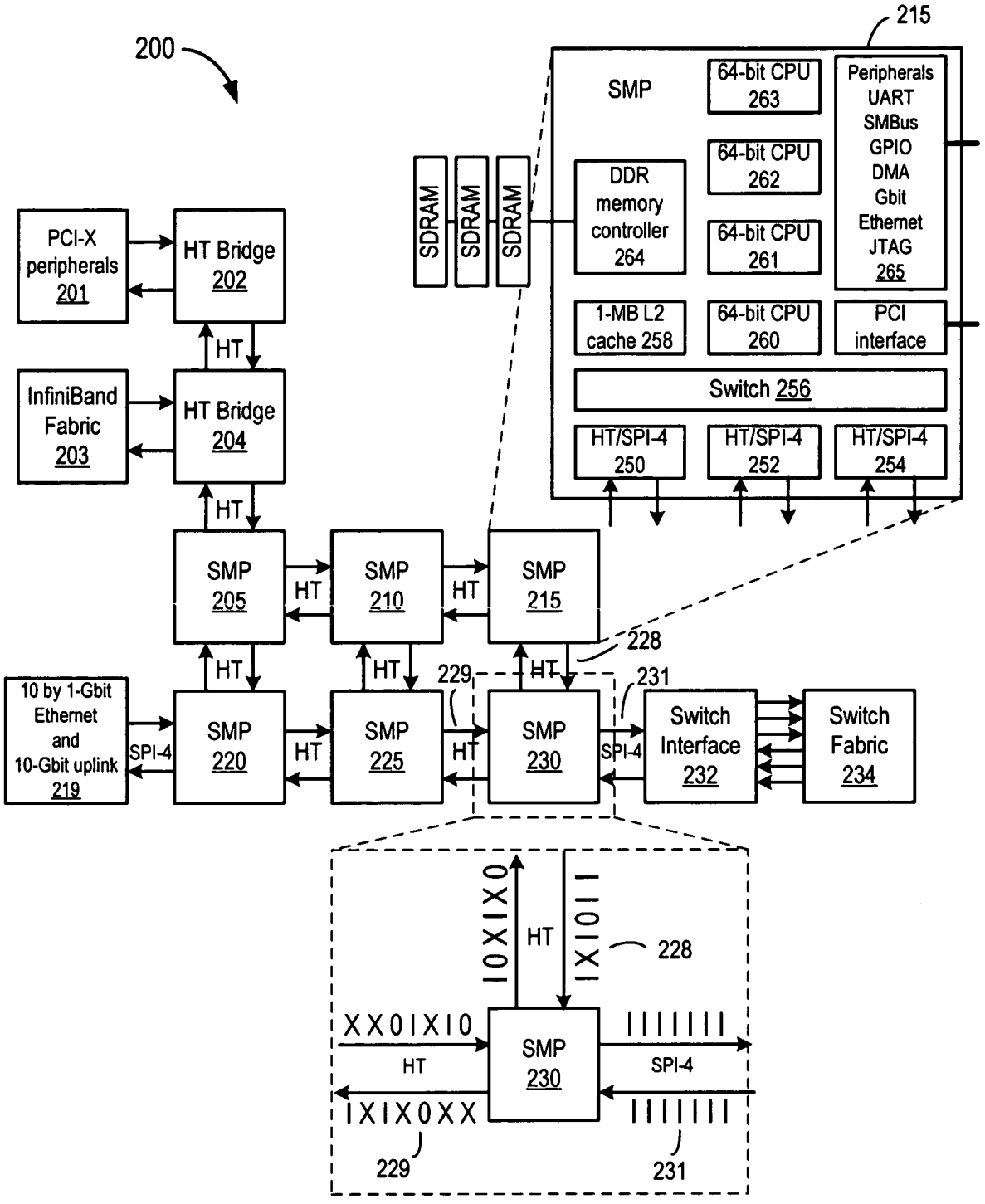
200
215
SMP
64-bit CPU 263
64-bit CPU 262
64-bit CPU 261
64-bit CPU 260
Peripherals
UART
SMBus
GPIO
DMA
Gbit Ethernet
JTAG
265
DDR memory controller 264
1-MB L2 cache 258
PCI interface
Switch 256
HT/SPI-4 250
HT/SPI-4 252
HT/SPI-4 254
SDRAM
SDRAM
SDRAM
PCI-X peripherals 201
HT Bridge 202
InfiniBand Fabric 203
HT Bridge 204
SMP 205
SMP 210
SMP 215
SMP 220
SMP 225
SMP 230
Switch Interface 232
Switch Fabric 234
10 by 1-Gbit Ethernet and 10-Gbit uplink 219
HT
SPI-4
228
229
231
10XIXO
IXIOII
XX0IXI0
IXIX0XX
IIIIIII

Figure 2

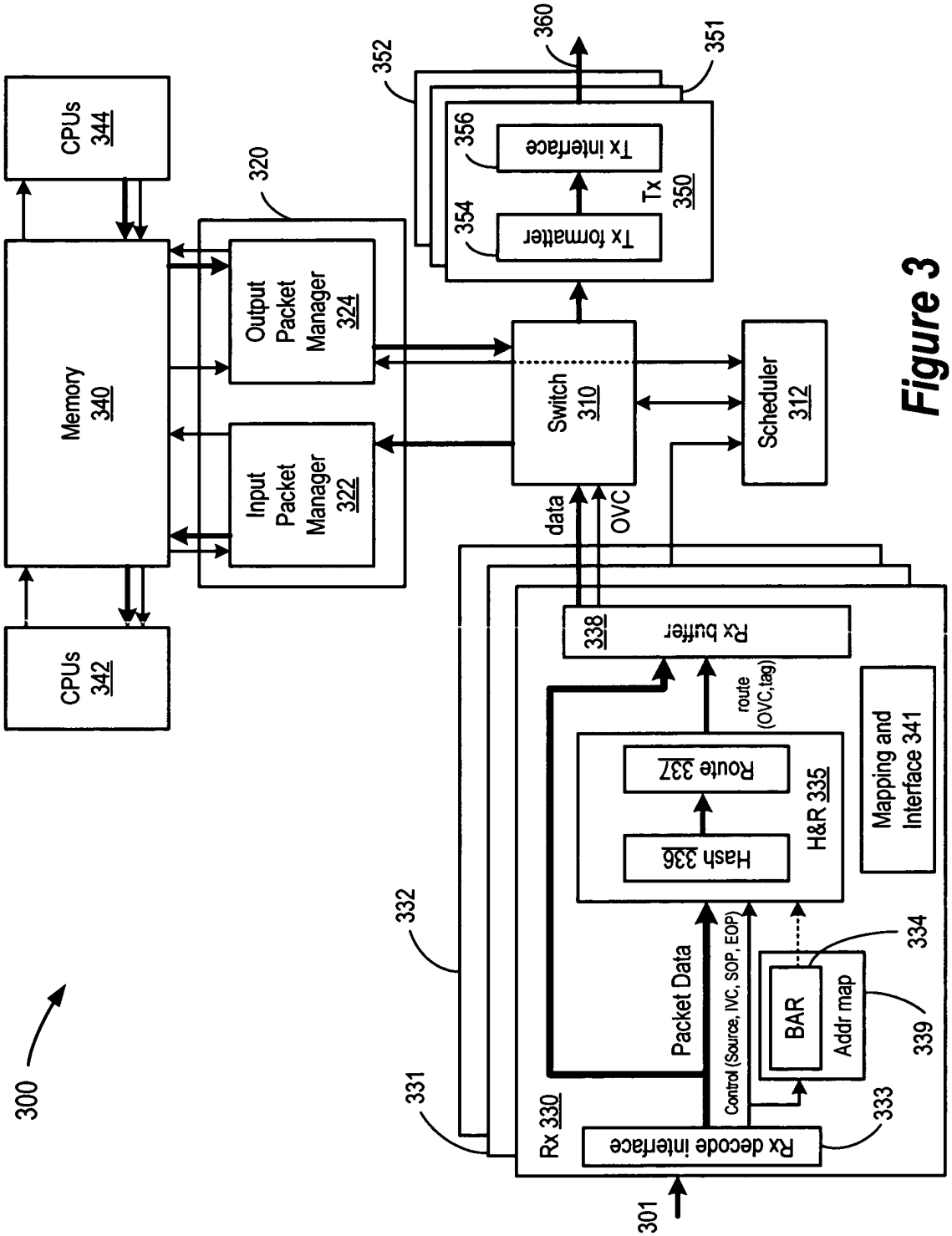
300
CPUs 344
CPUs 342
Memory 340
320
Output Packet Manager 324
Input Packet Manager 322
Switch 310
Scheduler 312
352
360
351
356
Tx interface
354
Tx formatter
Tx 350
data
OVC
338
Rx buffer
route (OVC,tag)
Route 337
Hash 336
H&R 335
Mapping and Interface 341
332
Packet Data
Control (Source, IVC, SOP, EOP)
BAR
Addr map
334
339
331
Rx 330
Rx decode interface
333
301

Figure 3

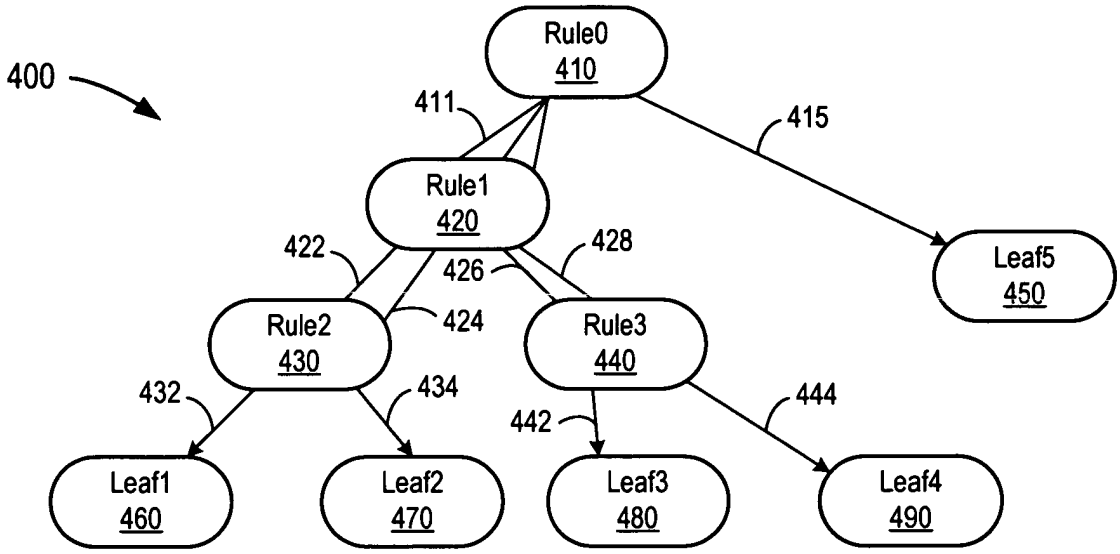
400
Rule0
410
411
415
Rule1
420
422
426
428
Leaf5
450
Rule2
430
424
Rule3
440
432
434
442
444
Leaf1
460
Leaf2
470
Leaf3
480
Leaf4
490

Figure 4

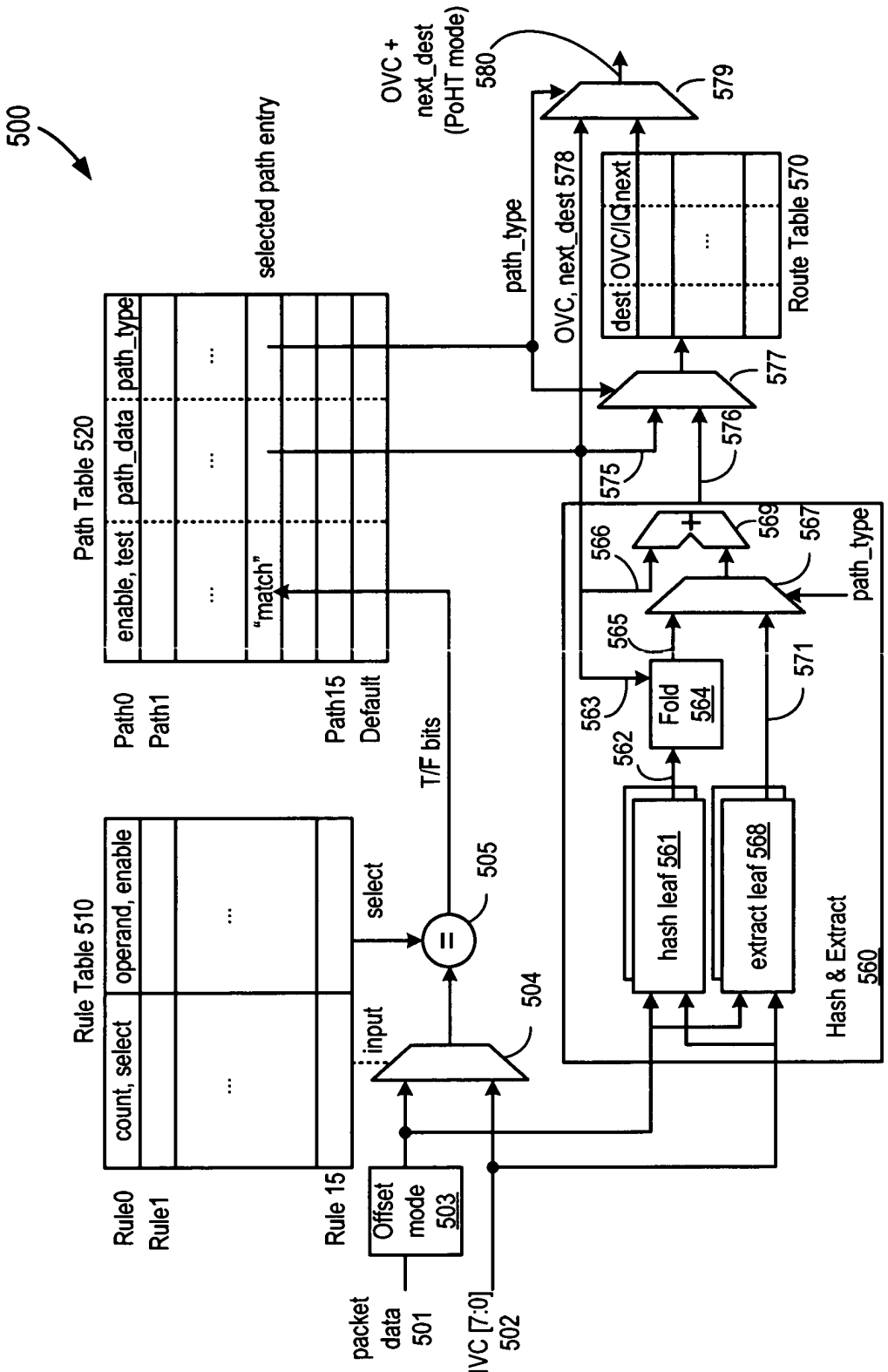
500
Rule Table 510
count, select
operand, enable
Rule0
Rule1
Rule 15
Offset mode 503
packet data 501
IVC [7:0] 502
input
select
504
505
T/F bits
Path Table 520
enable, test
path_data
path_type
"match"
selected path entry
Path0
Path1
Path15
Default
path_type
OVC, next_dest 578
OVC + next_dest (PoHT mode) 580
579
577
576
575
Route Table 570
dest
OVC/IC
next
566
569
567
565
563
562
Fold 564
571
hash leaf 561
extract leaf 568
Hash & Extract 560
path_type

Figure 5

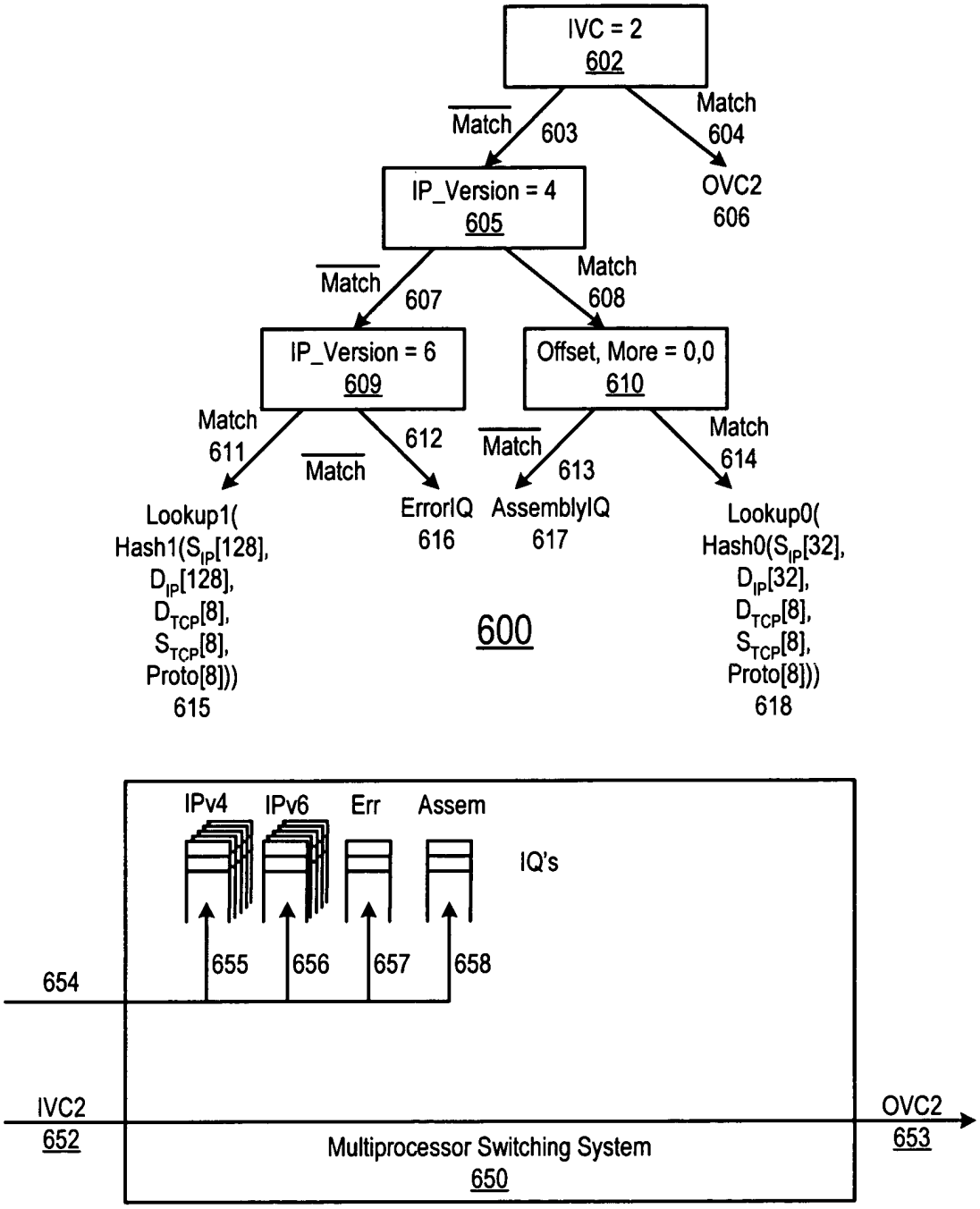
IVC = 2
602
Match
603
Match
604
OVC2
606
IP_Version = 4
605
Match
607
Match
608
IP_Version = 6
609
Offset, More = 0,0
610
Match
611
Match
612
Match
613
Match
614
Lookup1(
Hash1(S_IP[128],
D_IP[128],
D_TCP[8],
S_TCP[8],
Proto[8]))
615
ErrorIQ
616
AssemblyIQ
617
Lookup0(
Hash0(S_IP[32],
D_IP[32],
D_TCP[8],
S_TCP[8],
Proto[8]))
618
600
IPv4
IPv6
Err
Assem
IQ's
655
656
657
658
654
IVC2
652
OVC2
653
Multiprocessor Switching System
650

Figure 6